Appendix E - Executive Summary Threat Prioritization and Extirpation Risk Idaho Sage-Grouse Science Panel

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Executive Summary
Threat Prioritization and Extirpation Risk
Idaho Sage-Grouse Science Panel
Boise, ID
February 1-2, 2005

Background:
On February 1 and 2, 2005, the Idaho Sage-Grouse Science Panel was convened at the Idaho Department of Fish and Game's Morrison-Knudsen Nature Center, Boise. The Panel was facilitated by Steve Morey, USFWS, and Bob Ruesink, retired USFWS, and consisted of six scientists with expertise in sage-grouse, range, fire, and landscape ecology.

Panelists included Dr. Steve Bunting, Professor, Department of Range Science, University of Idaho; Dr. Jack Connelly, Principal Wildlife Research Biologist, Idaho Department of Fish and Game; Dr. Steve Knick, U.S. Geological Survey/Biological Resources Division; Dr. Karen Launchbaugh, Chairperson, Department of Range Science, University of Idaho; Dr. Kerry Reese, Professor, Department of Fisheries and Wildlife, University of Idaho; and Dr. Mike Scott, Leader, Cooperative Fisheries and Wildlife Research Unit, University of Idaho. Others in attendance included Steve Huffaker, Director, IDFG; Jim Caswell, Administrator, Office of Species Conservation; K Lynn Bennett, State Director, Idaho BLM; Ruth Monahan, Sawtooth National Forest Supervisor; and several agency staff members.

Threat Prioritization:
Following introductory presentations by IDFG and BLM wildlife biologists on sage-grouse biology, population and habitat status/trends, and threats to sage-grouse in Idaho, the Panel was first tasked with prioritizing the statewide threats previously identified by the planning subcommittee. After discussion among the Panelists, certain threats or threat categories were: (1)*revised* (fragmentation was renamed infrastructure; perennial grasslands refined to mean seeded perennial grasslands), (2) *combined* (wind energy was combined with infrastructure; Native American harvest as related to spring hunting was added to the category named human disturbance), (3) *dropped* (agency land use plan adequacy, effectiveness of Local Working Groups, mixed land ownerships, training upland bird dogs) or (4) *added* (Urban/exurban expansion, agricultural conversion, climate change). Nineteen threats were identified.

In ranking the 19 threats, each Panelist was asked to assign a score of 100 to the threat he or she thought was of highest priority; a zero to the lowest, and intermediate scores (1 to 99) for each of the remaining 17. In some cases, due to limited information, one or more Panelists assigned scores of equal value to two or more of the intermediate threats. After an initial

scoring exercise, and subsequent facilitated discussion, a second, final scoring was made. Individual threat scores from this final exercise were then averaged across the six Panelists, to create a composite score for each threat. These composite scores were then displayed in a bar chart portraying the relative composite ranking of the 19 threats (Figure 1).

Figure 1. Summary ranking of threats to sage-grouse in Idaho. Threat score reflects an average of scores assigned by six Panelists. Idaho Sage-Grouse Science Panel. February 1-2, 2005, Boise.

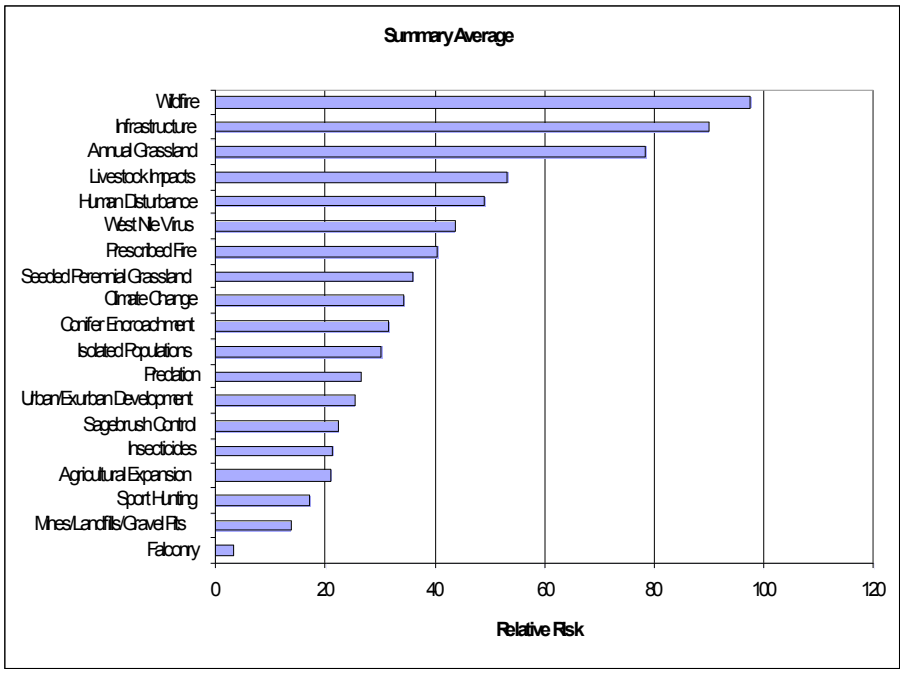

Figure 1 indicates that the top three ranking threats as scored by the Panel were (1) wildfire, (2) infrastructure, and (3) annual grasslands. Wildfire ranked highest, due to potentially large-scale impacts to already reduced habitat, its link with expanding annual grasslands, climate change and drought, and slowness of recovery times. Annual grass dominance and infrastructure development also ranked high since these factors can constitute essentially irretrievable losses of habitat. At least two Panelists suggested that there are few places on the Idaho landscape free of infrastructure or other indicators of human presence.

Livestock impacts ranked fourth in relative magnitude, partly because of the widespread extent of this factor on the landscape. It was also suggested that due to long-term, large-scale habitat losses arising from a variety of causes, there is less margin for error with the direct and indirect impacts from livestock management and other factors, since sage-grouse have fewer options or alternate places to go in the face of disturbance. It was also noted, however,

that proper livestock management can provide habitat supportive of sage-grouse, and that if there are problems, livestock management practices can be changed.

Predation and hunting ranked relatively low in priority (rank 12 and 17 respectively). Predation was not perceived to be a large issue controlling populations in good habitat, but could play a role in areas with small habitat patches. Most states, including Idaho, have adopted conservative hunting seasons for sage-grouse. Also, we have greater management control over hunting and little control over many other factors.

Extirpation Risk:
In this exercise, the Panelists were asked to prioritize specific geographic areas in Idaho with respect to the relative likelihood of sage-grouse extirpation, assuming status-quo management, and continued trends and trajectories of habitats, populations and threats. The Panel was reluctant to prioritize the existing 13 Idaho Sage-Grouse Planning Areas, due to a lack of familiarity of the Panelists with local conditions at that scale. Consequently, the state was divided into seven broader areas (Table 1, and Figure 2). In most cases, two or more SGPAs were combined, however three SGPAs, including the Owyhee, West-Central and Challis, were sufficiently large or distinct to warrant separate consideration. The Panelists were not comfortable estimating time to extirpation of sage-grouse for specific areas, though in general, they worked within the conceptual framework of decades from the present, as opposed to, for example, time-frames 200 years out.

Table 1. Areas evaluated for risk of sage-grouse extirpation. Idaho Sage-Grouse Science Panel. February 1-2, 2005. Boise.

Evaluation Area	Comments
West Central	West Central Sage-GrousePlanning Area (SGPA)
Owyhee	Owyhee SGPA
South Snake River	Jarbidge, Shoshone Basin, South Magic Valley SGPAs combined
North Snake River	Big Desert, Upper Snake SGPAs combined
Magic Valley	East Magic Valley, West Magic Valley, Mountain Home SGPA combined
Southeast Idaho	Curlew, East Idaho Uplands SGPAs combined
Mountain Valley	Challis SGPA

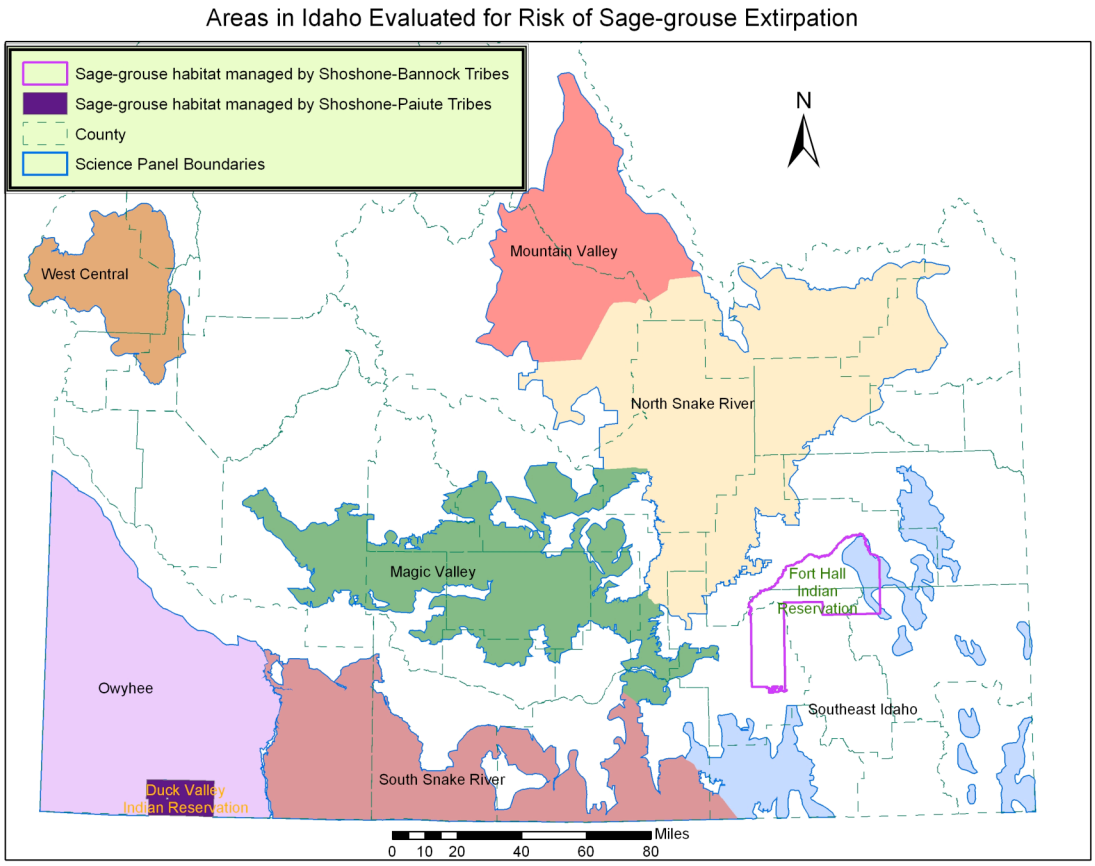

Figure 2. Areas in Idaho evaluated for risk of sage-grouse extirpation. Idaho Sage-Grouse Science Panel. February 1-2, 2005. Boise.

After an initial ranking exercise and subsequent discussion by the Panel, a final ranking of the seven areas was completed (Table 2). The West Central area ranked first in terms of sage-grouse extirpation risk, due to its isolated nature, high proportion of private property, low sage-grouse population numbers, high amount of annual grasslands, and lack of connectivity with sage-grouse populations in Oregon. The Panel felt sage-grouse populations there could be extirpated within 25-50 years without active conservation efforts. In contrast, the Owyhee area was ranked lowest in sage-grouse extirpation risk since it is a largely intact system and is contiguous with habitats and populations in Oregon and Nevada.

Table 2. Relative risk of sage-grouse extirpation by geographic area. Idaho Sage-Grouse Science Panel. February 1-2, 2005. Boise.

Risk of Sage-Grouse Extirpation (1= highest risk)	Evaluation Area	Rationale
1	West Central	Isolated population, mostly private property, annual grasslands, no connectivity to Oregon
2	Southeast Idaho	More secure than West Central, fragmented habitat, private lands
3	Magic Valley	Wildfire, annual grasses
4	South Snake River	Intermediate score, but breeding/wintering habitat fragmented
5	North Snake River	Intermediate score; large area, substantial remaining Key habitat; fires in the Big Desert
6	Mountain Valley	Intact System, fire relatively uncommon, good ecological condition, mostly public land, less risk of annual grass and juniper, 90% Key habitat, far from human population centers
7	Owyhee	Largely intact; contiguous with populations in Nevada, Oregon